



Department of Energy
Washington, DC 20585

WEATHERIZATION PROGRAM NOTICE 16-8
EFFECTIVE DATE: July 19, 2016

**SUBJECT: REVISED ENERGY AUDIT APPROVAL PROCEDURES AND
OTHER RELATED AUDIT ISSUES**

PURPOSE: To establish energy audit approval criteria used by the U.S. Department of Energy (DOE) to determine compliance with rule 10 CFR Part 440; to establish procedures by which Grantees can submit energy audits and lists of general heat waste reduction measures to DOE for approval every five years pursuant to 10 CFR Part 440.21(i); to establish requirements for switching energy audit tools; and, to establish requirements for DOE access to web-based energy auditing tools.

WPN 16-8 supersedes WPN 93-8, WPN 99-5, WPN 01-4, WPN 13-05, and WAP Memorandum 011. Additional energy audit topics are also discussed in this notice, including installation of cost-effective measures, electric base load measures and fuel switching.

SCOPE: The provisions of this guidance apply to all Grantees applying for financial assistance under DOE's Weatherization Assistance Program (WAP).

LEGAL AUTHORITY: Title IV, Energy Conservation and Production Act, as amended, authorizes DOE to administer the WAP (42 U.S.C. § 6861, *et. seq.*). All grant awards made under this Program shall comply with applicable law and regulations including the WAP regulations contained in 10 CFR Part 440. The final rule, published in Interim Final Rule December 8, 2000, established the minimum criteria for an energy audit used in the Program.

BACKGROUND: Since 2000, all Grantees adopted computerized energy audits to determine the most cost effective measures to install in a house. This WPN is designed to provide more complete and consistent information to assist Grantees in complying with the regulatory requirements stated in 10 CFR 440.

To assist Grantees, the following are included with this notice:

- Attachment 1 describes the information Grantees must submit and establishes the evaluation criteria used to approve energy audit procedures.
- Attachment 2 describes what information the Grantee must submit if it chooses to use a priority list, and sets forth the evaluation criteria DOE will use to approve priority lists for the WAP.
- Attachments 3 and 4 list nationally approved and single-Grantee approved energy audits, respectively, and show the building types for which each of the audit tools is currently applicable.
- Attachment 5 provides guidance on fuel switching.

PROCEDURES: Audits must be certified every 5 years, Grantees shall submit the required energy audit information to their DOE Project Officer (PO) within 5 years of their previous approval in order to allow time for the information to be reviewed and approved. **All Grantees must have single family and manufactured housing procedures and protocols in place** (except for the limited instances where manufactured housing is rare or prohibited, as is the case in some territories).

Grantees whose multifamily units (in 5+ unit buildings) are greater than 20% of the annual production are required to go through the same approval process for multifamily housing. However, because of the specialized skill set required in the auditing of multifamily buildings, approvals are conditional on the ability of the Grantee to adequately oversee the multifamily audits. In the case where the Grantee has turnover in staff and no longer maintains the necessary staffing at the Grantee level to oversee this component, DOE will require the Grantee to submit the audits to the PO on a case-by-case basis until the Grantee is able to rebuild the staff/skill set at the Grantee level.

Grantees whose multifamily units (5+ unit buildings) is less than 20% of annual production may choose to go through the same approval process but the conditional aspects of maintaining multifamily expertise remain in place. If a Grantee does not have an approval in place but will be undertaking a multifamily project, the Grantee must submit the project details to the PO for review prior to the project commencing.

In all housing types, supplementary priority list information (see Attachment 2) is required if the Grantee elects to use priority lists in addition to site specific audits for WAP service delivery. The PO will be responsible for reviewing the submittal to ensure that all the information has been submitted.

DOE will review Grantee audit procedures for compliance with the applicable regulations based on a two-tier approval process.

- The first tier is a fast-track review where the Grantee proposes to use an already-DOE-approved audit tool designed to calculate the required Savings-to-Investment Ratios (SIR) (see below). In the case where the submittal package contains all of the information required and fulfills the review requirements, the

application will be processed within 30 days of official acknowledgement of receipt by DOE. Upon approval, the Grantee audit procedures will require no further review for a five-year period unless significant changes are made to the audit protocol by the Grantee.

Special Note: If the audit submittal package is lacking sufficient information for an adequate review or the audit procedures are not in compliance with the regulations, or includes use of an audit tool that was not previously approved by WAP, the audit will receive further review under the second tier of the approval process.

- The second-tier review will be handled on a case-by-case basis. DOE will work with Grantees under the second tier review to assist them in gaining approval. DOE assistance will begin with the PO informing the Grantee specifically what is required to gain audit approval. This approach is more time consuming and can delay operations at the Grantee level while the audit is under review.

It is anticipated that many Grantees will want to use one or more of the following audit tools previously approved by DOE as part of its audit procedures. Additional details related to these audits can be found in Attachment 3:

DOE-Sponsored Audit Tools that meet WAP Requirements (*as of June 2016*):

- National Energy Audit (NEAT) – single family, small multifamily (conditional)
- Manufactured Home Energy Audit (MHEA) – manufactured housing
- Multifamily Tool for Energy Audits (MulTEA) – multifamily residences with individually heated and cooled units

Commercially Available Audit Tools that meet WAP Requirements (*as of June 2016*):

- Energy Audit using the Queens Information Package (EA-QUIP) – small and large multifamily
- REM audit software (single family, manufactured housing, small and large multifamily)
- Targeted Retrofit Energy Analysis Tool (TREAT) – single family, manufactured housing, small and large multifamily
- Hancock Energy Audit Tool (HEAT) – single family
- Energy Conservation Online System (ECOS) – single family, manufactured housing
- Quick Energy Simulation Tool (eQUEST) – small and large multifamily (output must be modified to meet DOE and WAP requirements)

Grantees requesting DOE approval to use tools listed above are not required to submit a description of the energy estimating methodology, measure interaction, or cost-effectiveness requirements listed in Attachment 1. However, DOE reviews not only how the energy audit tool is used to estimate energy use and potential weatherization savings,

but also how a Grantee implements their energy audit procedures. Therefore, Grantees requesting approval to use NEAT, MHEA, MulTEA, EA-QUIP, HEAT, REM, TREAT, ECOS and eQUEST still must list the measures that are typically enabled and provide the input data, assumptions, and audit results (recommended measures) for at least ten dwelling units, drawing the sample from completed Subgrantee audits. These audits must be typical of those weatherized by the Grantee's program representing climate zones throughout the state. All of the information on field procedures and administrative requirements described in Attachment 1 must be provided with these requests.

Some Grantees may want to use internally-developed energy audit tools, tools developed by other Grantees or other commercially available energy audit tools. Grantees are reminded that all audit procedures using tools that have been developed or modified since DOE's last approval of the specific tool, even including the tools listed above, require a full submittal for DOE approval and will require a more in-depth second-tier review. As other DOE-sponsored or commercially-available energy audit tools are approved, DOE will issue a list of all approved software that carries the same reduced submittal requirements.

As a reference for Grantees that might be considering development of their own audit tools, Attachment 4 includes the Grantee-developed tools that are currently approved for specific Grantees.

Except for the cost of materials needed to eliminate health and safety hazards existing before or because of the installation of weatherization materials, all weatherization measures must be "cost effective" as defined by DOE. "Cost effective" means that each measure and package of measures installed in a dwelling unit must have a savings-to-investment ratio (SIR) which meets or exceeds 1.0. There is a single exception: blower door guided air sealing may have an SIR less than 1.0.

The cost effectiveness requirement stipulated above, along with 2 CFR 200.323 which states that Subgrantees "must perform a cost or price analysis in connection with every procurement action," dictates that Subgrantees must review and update as necessary their energy audit cost libraries at least on an annual basis, corresponding with the initiation of new contracts (or annual approvals of multi-year agreements).

While the audit approval by DOE ensures compliance with the regulations, on-going monitoring is required to ensure that the energy audit tools continue to determine cost-effective weatherization measures. This requirement is especially important when Grantees elect to use web-based energy auditing software approved by DOE or when the software is modified without DOE vetting the modification or the accuracy of the audit tool. DOE will require access to all Grantees' web-based auditing software throughout the duration of the grant. As of June 2016, ECOS, HEAT and EA-QUIP are the only web-based pieces of software nationally used, but others are anticipated to move to web-based applications in the future.

If a Grantee wants to revise or change their auditing tool during the five-year validity period of the DOE approval, then it must request DOE's approval to do so and provide sufficient information in accordance with Attachment 1. Until the request is approved, the Grantee must continue to use its currently approved audit procedures.

OTHER ENERGY AUDIT-RELATED ISSUES:

MEASURE SKIPPING: By rule and policy, energy audits are required to use the interactive procedures to determine the optimum set of cost-effective measures and to prioritize those energy saving measures in order of cost-effectiveness. This guidance is designed to provide Grantees with enough information to develop energy audits that comply with requirements.

Once approved, all of the prioritized weatherization measures from the audit that meet the SIR ratio requirement must be installed in the unit in the order of cost-effectiveness. Deviating from the audit prioritized list of measures would be in conflict with the intent of the rules. Frequently Asked Questions (FAQs) concerning measure skipping will be posted on the EERE website.

PRIORITY LIST: Priority lists are based on specific parameters and many of these, like energy costs and labor and material costs, change with time. DOE will be reviewing priority lists during the monitoring process to ensure the measures in the approved priority lists continue to be installed in the proper order. As discussed above, Grantees must annually, at a minimum, ensure that energy costs, measure implementation costs, technological advancements, and other issues that affect best weatherization practices in order to ensure the approved priority lists remain cost effective and appropriate for the weatherization process. Grantees shall submit to DOE a request to alter their priority lists based on adjusted calculations. These requests are generally processed within a week of acknowledgement of receipt, if all required materials are included in the submission. This action does not "restart" the five year cycle, but merely adjusts the priorities.

FUEL SWITCHING: WAP previously did not permit the general practice of non-renewable fuel switching when replacing furnaces/appliances, but did allow the changing or converting of a furnace/appliance using one fuel source to another on a limited, case-by-case basis. Now, as the WAP continually develops skilled and technically proficient program personnel at the state and local levels, DOE has revised the fuel switching policy in eligible homes served by the Program. WAP Grantees are now provided two options regarding the decision-making process for fuel switching to occur:

1. The Grantee may continue to submit individual fuel switching requests to DOE for review and approval, or
2. The Grantee may opt to administer the fuel switching policy at their level.

Further fuel switching guidance and submittal requirements are included in Attachment 5.

ELECTRIC BASE LOAD: Typically, addressing the heating and/or cooling costs of a dwelling unit, accounts for only about half of that home's energy expenditures. DOE allows the addition of cost-effective electric base load measures to give Weatherization Grantees greater flexibility to help low-income households reduce their energy costs and to partner with sources of leveraged funds.

USE OF WEATHERIZATION FUNDS FOR RENEWABLE ENERGY SYSTEMS:

Assistance under the WAP may be provided for renewable energy systems. 10 CFR Part 440.18 (Allowable Expenditures) incorporates the renewable energy system provisions and specifies a ceiling of \$3,000, with annual escalations, per dwelling for labor, weatherization materials, and related matters. The PY 2016 adjusted average for renewable energy measures is \$3,545 for renewable energy system measures with a SIR of at least 1. For subsequent program year the adjusted average for renewable energy measures will always be specified in the Program Year Weatherization Grant Guidance in the paragraph related to Adjusted Average Cost per Dwelling Unit.

10 CFR Part 440.21(c)(1) specifies performance and quality standards criteria for renewable energy systems. Paragraph (c)(2) establishes a procedure for submission and action on petitions by manufacturers requesting the Secretary of Energy to certify a new technology or system as an eligible renewable energy system. Requirements for submitting such petitions are included in Attachment 6.

CONCLUSION: The WAP continues to make progress in a number of areas and updating our audit processes is just one of the components necessary to ensure quality work is being performed throughout the Program. The Department of Energy appreciates your many contributions that continue to make Weatherization Work!



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Enc: Attachments